



VI.

Essays on the Diseases of Children, with Cases and Dissections.—Essay First: Of Cynanche Trachealis or Croup. By John Cheyne, M. D. Fellow of the Royal College of Surgeons of Edinburgh.—Large 8vo. Edinburgh. 1801.

THAT the diseases of children well merit the serious attention of every medical practitioner, no one will, we believe, be disposed to deny; and it will also be admitted, that our knowledge with respect to these diseases is, in many particulars, very defective. Dr Cheyne's design, therefore, of discussing, in separate essays, the most important of the diseases of children, must, we conclude, meet with general approbation; and the manner in which he has treated, in this first essay, of the Croup, a disease in many places very fatal to infants, gives us a very favourable specimen of his investigations.

He

He defines Cynanche Trachealis, or that affection which, in different parts of Britain, is known by the name of Croup, to be an inflammatory affection of the trachea, which, in the progress of the disease, is accompanied with an effusion, which becomes a tubular membrane, lining the inflamed surface. Here we may observe, that the disease is defined, not by its symptoms, but from its nature. Although we agree perfectly with Dr Cheyne in his opinion respecting the nature of this, yet we cannot help thinking, that it is much better to define diseases, as has been done throughout by Dr Cullen in his inestimable work on Nosology, by obvious symptoms than by supposed causes. It is from obvious symptoms only, that diseases can be distinguished during the life of the patient. Definitions, taken from circumstances which can be discovered only by dissection after death, such as a tubular membrane lining the inflamed surface, are in reality of no use. We are, therefore, surprised, that Dr Cheyne did not rather adopt the excellent definition of this disease, which had before been given by Dr Cullen.

He defines the cynanche trachealis by the following marks :

“ Respiratione difficili, inspiratione strepente, voce raucâ, tussî clangosâ, tumore ferè nullo in faucibus apparente, deglutitione parùm difficile, et febre synochâ.”

Perhaps this definition, accurate as it is, might even be improved ; at least the term *inspiratio strepens*, does not fully convey an idea of that symptom by which croup is characterized ; a noise, viz. on inspiration, somewhat resembling the crowing of a cock. This peculiar noise may justly be considered as pathognomonic of the disease. It is never wanting in any instance of croup ; and it never occurs in any other affection. Hence those who have once heard the peculiar sound produced by the inspiration of those labouring under cynanche trachealis, can be at no loss in distinguishing this affection on any future occasion.

After giving a definition of the disease, Dr Cheyne presents us with a full and accurate history of this affection, chiefly derived from his own observation.

The

The croup, he observes, is less known in the temperate than in the northern regions of Europe. Though peculiar to no season, it chiefly appears in the winter and spring, in low situations, exposed to air passing over large bodies of water, and it is particularly a disease of sea-port towns. It is very prevalent in cold and changeable weather, often appearing after a cloudy or hazy day.

The croup is chiefly met with in children, from a short time after birth until puberty. It prevails in particular families, and generally attacks the most robust and ruddy children. It occurs rarely in children exhausted by some other disease.

The disease generally begins in the evening, after the patient has been much exposed during the day; and it often begins after a slight catarrh of some days standing. At first, the voice is observed to be hoarse and pulling, and the little patient shuns his usual amusements. His illness does not prevent him from going to sleep; but he soon awakes with a most unusual cough, rough and stridulous. His breathing is now laborious, each inspiration being accompanied by a harsh shrill

noise, most distressing to the attendants. His face is flushed and swelled; his eyes blood-shot, and he seems in constant danger of suffocation. His skin burns, and he has much thirst; he labours more and more in breathing; still the ringing noise is heard, and the unusual cough. He tries to relieve himself, by sitting erect, but no change of posture, no effort gives him relief. Generally his sufferings are thus protracted till morning, when perhaps there is a slight remission; his breathing is a little easier; but the anxiety, the fever, and the cough, remain. He is soon as ill as ever again; and being gradually weakened by the violence of his illness, with purpled lips, and weakened countenance, he dies in two or three days.

In other cases, the disease, after continuing some time, appears suddenly alleviated. The breathing is free; the child soon becomes cheerful; his appetite for food returns; he amuses himself, and seems perfectly recovered; and the hope of every one is raised, only however to make disappointment more keen; for the child suddenly gets worse, and dies: his livid and swollen face, and convulsive struggles,
give

give him the appearance of one that is strangled.

When the croup is favourable, it terminates in various ways. Most commonly, after the disease has arrived at its height, the sequel is as it were a retrogression of the attack. A moisture is poured out upon the skin; the fever and the croupiness decline; and, lastly, the cough gradually wears away.

When bleeding is used, on the commencement of the violent symptoms, the relief is often immediate. Sometimes, after the disease has continued a few days, a viscid and white substance is expectorated, and the child is relieved. Sometimes croup assumes a chronic form, and does not subside for weeks. The resolution is then very gradual; the child at times coughing up portions of this white membrane.

When the fauces and neck are examined, even although the patient complain of a sense of heat in the throat, the tonsils are not swelled, and but little inflamed. In some instances, a fulness may be observed in the swell of the neck; but the disease is generally unaccompanied with this sign.

A

A first attack seems to establish a predisposition to this disease, as well as to cynanche tonsillaris: a slighter cause will produce croup a second time, than was originally required; and children, who have once had the croup, when they are affected with catarrhal complaints, have more or less of the croupy cough, till they arrive at their fourteenth or fifteenth year.

Upon dissection, the cause of the alarming symptoms becomes sufficiently obvious. When the child dies, after an illness of three, four or five days, there is found lining the wind-pipe a white membrane of considerable tenacity. It arises a little under the larynx, and is sometimes prolonged into the division of the trachea; and generally a quantity of a white fluid-like matter, with which the lungs are filled, is seen gurgling up. The attachment of the membrane is slight, but the inner-coat of the wind-pipe is inflamed.

The inflammation, which is still perceptible, and which must have been more considerable before this fluid exuded, Dr Cheyne holds to be the immediate cause of the bad symptoms in the first stage of the disease, and
he

he holds the adventitious membrane and puriform fluid, which he views as consequences of that inflammation, to be the immediate cause of the bad symptoms in the conclusion of it.

After thus explaining the pathology of the disease, Dr Cheyne proceeds to treat of the practice. With a view to the formation of a plan of cure, it is proper, he observes, to consider the disease as consisting of two stages; the incomplete or inflammatory, and the complete or purulent. In the former, the membrane is not yet formed; in the latter, it is fully formed. It is in the first stage that efforts for the cure of the disorder are principally to be made.

In the first and second days of the illness, the croupiness being attended with much pyrexia, blood is to be let freely; and to do it effectually, Dr Cheyne observes it must be done by the lancet. In this disease, the jugular veins are always tumid; and in a child it is easier to let blood from these than even from the veins of the arm. Here he tells us it is of much consequence, as in other inflammatory diseases, to take a large quantity of
blood

blood without delay ; but he reckons from three to five ounces a full bleeding in a child under five years of age ; and if the child be worn out by former illness, or of a tender constitution, bleeding by leeches may be more advisable.

After bloodletting, Dr Cheyne has observed the best effects from emetics and the warm bath, which, either together or separately, by their antiphlogistic powers, in many instances prevent the formation of the disease. Brisk purges, especially where the bowels are inactive, are also of great use. He has found also great advantage from the solution of tartarized antimony, given every three or four hours in nauseating doses. The antimonial solution may, in combination with laudanum, be administered as a diaphoretic. But while the febrile symptoms run high, he prefers the solution by itself, so as to occasion a continued nausea. On the application of a blister to the neck, great dependence is put in this disease by many practitioners. This practice also, Dr Cheyne tells us, he has seldom omitted ; and he believes it a valuable addition to the plan of cure, although he cannot affirm
this

this upon his own experience. But the remedy on which he places the chief dependence, is the first mentioned, bloodletting. If it be not in the first instance attended with an abatement of the bad symptoms, he advises that it should be repeated according to the strength of the patient; and where the use of the lancet a second time may seem inadvisable, he recommends the application of a number of leeches to the neck.

During the second stage of the disease, which is known by some remission in the phlogistic appearances, by the pulse getting smaller, by the difficulty of breathing continuing or increasing, and by a sediment in the urine, Dr Cheyne has been induced, from observing on dissection, that the veins of the thyroid glands are very turgid, to apply leeches to the neck; and he has also used emetics, to procure, by the agitation which they produce, the expectoration of the membrane, which sometimes occupies only a small space in the trachea. He advises also, that the bowels should be kept open by glysters; and that, in place of the low regimen observed in the first stage of the disease, care should

be taken to support the strength of the patient. From calomel, which some have recommended with the view of bringing on salivation, Dr Cheyne tells us he has never obtained any benefit. But he thinks that it promises success in a chronic state of the disease.

Some have proposed, that in this disease the operation of bronchotomy should be performed, and the adventitious membrane pulled out. But to this proposal Dr Cheyne states many objections; and, indeed, he considers the extraction as impracticable.

With the view of illustrating the account given of the nature and treatment of croup, Dr Cheyne subjoins some cases of this disease. The first four point out the advantage of blood-letting, and the fifth shews a termination of the disease, by the expectoration of a membrane, effected by the use of emetics. Five cases are also detailed, in which this disease terminated fatally; and the appearances found, on the dissection of three cases, are illustrated by plates, which do great credit both to the dissector, to the painter, and to the engraver.

